DEPARTMENT OF HEALTH

MC0323

ESTATECODE

GUIDANCE
ON

PROPERTY APPRAISAL

DEPARTMENT OF HEALTH

ESTATECODE

PROPERTY APPRAISAL

LONDON: HER MAJESTY'S STATIONERY OFFICE

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First published 1989

ISBN 0 11 321168 6

DEPARTMENT OF HEALTH

Advisory Group on Estate Management

Part of
ESTATECODE
Level 2

Guidance on

PROPERTY APPRAISAL

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This Guidance is issued by the Advisory Group on Estate Management. Any enquiries on it should be made to the AGEM Secretariat, Estate and Property Management Directorate, Euston Tower, 286 Euston Road, London NW1 3DN

FEBRUARY 1989

1. *Introduction*

1.1 Health Authorities need to ensure that their estate is efficiently managed and brought to an optimum size and condition consistent with the need for present services and planned future developments.

1.2 If Authorities are to develop effective strategies for estate management, resulting in realistic and cost effective estate control plans and the annual estate management operational plans, they will need to have a database detailing the extent, value, utilisation and condition of their estate. The condition of property is never static; over time buildings may become functionally obsolete, under-utilised or over-crowded. Energy performance and statutory standards also change. This means that effective estate management requires that buildings are regularly assessed and the database updated.

1.3 Each Health Authority has already undertaken an initial survey of the condition of its stock of buildings which should only require updating. This document does not set standards as such, these are already defined elsewhere; its purpose is to outline a methodology, based on extensive field trials, which brings together these various inter-related elements of property appraisal into a single system. Health Authorities will develop their own procedures for implementing this appraisal system. Alternatively, a model set of procedures is available ("A Guidance Manual for NHS Property Appraisal") which is published as an annex to the WIMS Implementation Guide.

1.4 Figure 1 sets out a procedure for property appraisal which has resulted from field trials. The following principles have proved to be useful in practice:

i Surveys should use national guidance as a basis for ranking. (This guidance includes Health Building Notes, Health Technical Memoranda, Health Equipment Notes and ADB Sheets. All concerned should agree on any operational constraints which may affect the standards to be applied.)

ii As a preliminary to the exercise, all necessary plans of the properties, for the whole District at the appropriate scale, should be obtained and boundaries separating major functional groups agreed. (A functional content analysis for the District can then be undertaken based on Capricode.)

iii The first step should comprise a very broad brush assessment of the whole of a District's estate to identify the key performance characteristics which will enable the interactive estate rationalisation and service planning stages to be undertaken.

iv The second stage should identify specific areas which require further, more detailed, attention. (The adoption of a targeted approach will ensure that the requirement for appraisal and surveying resources is minimised. Collection of detailed data is not an end in itself — the process should always be carefully structured and directed to those parts of the estate which are most likely to deliver the greatest benefit.)

v The resulting information should be held on computer files and a WIMS property appraisal package is now available. (With data held in this form, follow-up analysis, trends and cross-matching with other associated service planning factors will be made easier.)

vi Data should be assembled in such a way that it can be aggregated to give both whole building and care group assessments. (This approach requires an apportionment judgement to be made particularly in those departments that serve several care groups.)

vii Clear and concise presentation of the end result is vital if the material is to be of maximum use for strategic decision taking. (Figures 2, 3 and 4 illustrate the data to be collected.)

2. *Principles*

2.1 The various elements of one survey may interact with elements of another; thus it is essential to the validity of the appraisals that double accounting is avoided. The following approach has proved useful in practice:

i if the physical condition and/or the functional suitability results in a breach of statutory or safety requirements, (Crown immunity notwithstanding) the defect should be recorded against safety and statutory requirements;

ii if the physical condition is reasonable, but the functional performance is poor, the cost should be attributed to functional suitability;

iii if poor physical condition leads to low functional performance the cost should be attributed to physical condition.

2.2 Consistency in appraising across the wide range of properties involved is essential if useful cross-comparisons are to be made. A single standard covering every situation is not normally practical,

but it is necessary to identify clearly the standards adopted. Appendix 1 defines a ranking structure which will assist in achieving consistency. It must be stressed that in most cases a building or facility ranked B will be acceptable for the provision of healthcare.

2.3 The success of the exercise will depend on establishing an effective survey team comprising members of the care group or function to be appraised, together with professional disciplines at the local level. Surveys should be as objective as possible but, it is accepted that in many instances, they will need to rely heavily on subjective assessment. Clearly, all the assessments will require close co-ordination if duplication of effort is to be avoided and consistency is to be achieved. The resource requirements of mounting the appraisals should represent a small proportion of the savings likely to be gained from applying the knowledge of the estate, particularly when viewed against the wider implications of estate rationalisation.

2.4 The following sections describe the approach for:

Functional Suitability

Space Utilisation

Physical Condition

Fire Safety and Statutory Requirements

Energy Performance

2.5 Some Authorities may wish to combine the rankings for the various surveys into one overall mark. A suggested procedure is presented in Appendix 2.

3. *Functional Suitability*

3.1 Before departmental assessments are undertaken a whole site assessment needs to be made. This overview will identify those facilities which are of crucial importance to the efficient running of the whole and will enable a list of sites requiring detailed investigation to be drawn up. The following factors need to be considered:

i the location of the hospital in terms of its relationship to centres of population, transport, amenities, Regional specialities, etc

ii site characteristics and access

iii balance of provision

iv relationship of departments.

3.2 The departmental functional suitability assessment will determine how effectively a building (or part of a building) supports the delivery of a specified service. Key factors which contribute to such an assessment are:

i Space relationships — the critical dimensions for the function and the relationship of spaces within the facilities should be satisfactory, walking distances for patients and staff should be acceptable and there should be adequate patient observation;

ii Services — the range of services (including the ratio of beds to WCs, baths, storage space, etc) should be suitable for the function;

iii Amenity — the level of privacy afforded to patients (and staff) and the working conditions of staff should be acceptable by modern standards and the public should gain a favourable impression of the facility;

iv Location — the location of the facility (ie in terms of its relationship to other related departments and external features such as entrances, loading bays, etc) should be acceptable;

v Environmental conditions — the heating, lighting, ventilation and noise levels should be maintained at an acceptable level;

vi Overall effectiveness — the overall balance of provision within the facility should not constitute an impediment to its function.

3.3 The ranking should conform to the outline given in Appendix 1. The "full life" part of the definition will not apply to functional suitability assessment. In subjective terms the ranking will indicate:

A — high degree of satisfaction;

B — acceptable/reasonable; no major change necessary;

C — below an acceptable standard;

D — unacceptable in its present condition;

X — supplementary for rating added to D to indicate that the facility is so below standard (or so impossible or impractical to improve) that nothing but a total rebuild will suffice.

3.4 Where the marking is C or D an assessment will need to consider:

i how long condition C or D can be allowed to continue and hence the urgency to improve the standard;

ii the cost of bringing it up to condition B. (It would be unrealistic and indeed impracticable to provide an answer to this in each case — but an indication of the cost implications should be provided if possible.)

4. *Space Utilisation*

4.1 The average property overhead (*see Figure 5*) cost in the NHS is in excess of fifty pounds per square metre per annum (1986 prices); therefore the objective must be to hold no more space than is strictly necessary to satisfy the reasonable demands of the present function and planned requirements. The identification of under-used space and spare capacity, closely associated with feasibility and rationalisation studies, will enable substantial revenue savings to be made which can then be reinvested to enhance or extend the service. Because of the very substantial revenue savings that are possible by eliminating under-used space and taking advantage of any spare capacity, this exercise should be given a very high priority in property assessment.

4.2 Space utilisation is an area which is both complex and sensitive since it touches on territorial issues. For this reason it is important that users understand the true costs of occupying space and the real benefit which can flow from space rationalisation. The exercise needs to bring together in a close working environment the user (client) and those with planning and design skills. The most important ingredient will be the drive and determination from management to obtain results within tight timescales.

4.3 A rigid standard approach is not advocated. Instead it is recommended that the "broad brush" stage is approached pragmatically and is based upon informed and experienced observation. It will constitute a snapshot in time and therefore needs to be completed within a tight timescale. Once targets for further detailed appraisals have been identified the approach will depend on the nature of the service or function. Clearly the ward, theatre suite, kitchen and boiler plant will each require different approaches.

4.4 An approach which has proved useful in practice — for more detailed studies — and has led to substantial reductions in floor area, makes use of on the spot observations of under-used areas.

The results of these observations are brought together on a plan thus identifying the full extent of areas of underutilisation, and the savings that can be made in property overheads.

4.5 At this stage initial reaction to the plan is often to try to justify and defend the present situation by indicating just how impossible it is to release such space because:

i it is usually made up of a collection of zones which are small in area, or dispersed over a wide area, and therefore not worth worrying about, or

ii the space is locked into unusable positions by virtue of its relationship to structure, external or load bearing walls, stairwells, etc.

In most situations such spaces can only be "unlocked" if functions are radically re-organised. Usually a more determined and radical approach will give greater rewards. Feasibility studies followed by option appraisals will indicate the most promising and practical possibilities taking into account the benefits and costs involved.

4.6 It has been shown that this technique alone (based only on informed observation and followed up with feasibility studies) may make it possible to relocate a function, service or whole hospital into the space released within another. Although some modest additions may be required, the total capital costs — including the cost of organisational disruption — may amount to little more than one year's revenue savings. Typically, the revenue savings are made up of reductions in the property overhead listed in Figure 5. In addition, there may well be capital income realised from the redundant site(s) and additional revenue obtained from letting spare accommodation to other users. In those areas where land cost is comparatively low, such an approach can be justified on revenue savings alone.

4.7 The adoption of a single numerical scale set beside the condition appraisal has also proved useful in practice, particularly when assessing at the Departmental level. The categories are as follows:

Empty	1
Underused	2
Adequate	3
Overcrowded	4

4.8 Occupying space is costly and therefore requires continual attention both in gathering data and in preparation for the planning round. In acknowledgement of this, the report on

Underused and Surplus Property in the NHS recommended: "...the function of space management should become an identifiable responsibility in Regions and Districts". This responsibility will need to be backed with a range of skills upon which it can draw, will inevitably be constitutionally different depending upon each specific situation and, to be effective, will need to have authoratitive and enthusiastic backing.

5. *Physical Condition*

5.1 A broad knowledge of the physical condition of the existing estate — building, associated engineering services and external works — is an essential factor in resource planning in the NHS. Furthermore, such information constitutes an essential base from which a maintenance and minor works strategy can be prepared and estate operational programmes formulated.

5.2 The appraisal is carried out for each of nineteen physical elements. The average overall condition of each element is estimated to be in one of the four categories ranging from A to D as outlined in Appendix 1. Broadly, the interpretation of the ranking is:

A — the element is as new and can be expected to perform adequately to its full normal life.

B — the element is sound, operationally safe and exhibits only minor deterioration.

C — the element is operational but major repair or replacement will be needed soon, ie within three years for building and one year for an engineering element.

D — the element runs a serious risk of imminent breakdown.

X — a rating added to C or D to indicate that it is impossible to improve without replacement.

Appendix 2 suggests a procedure which may be used to combine the nineteen elements into one overall physical condition ranking.

5.3 Following categorisation, the cost of appropriate measures to upgrade a C or D condition to the B level, should be recorded. Condition B is to be considered as an operationally acceptable standard for all building and engineering elements. In some instances, particularly where engineering services are involved, the cost to upgrade to B may be equivalent to the cost to upgrade to condition A.

5.4 Where certain deficiencies are found which affect only part of an element (ie in condition B) the repair cost should be estimated and recorded.

5.5 Although it is recognised that in many cases it will be little more than a subjective assessment, it is nevertheless important that the best estimate of the remaining life of the element is made. This estimate should assume that it will continue to be maintained at the same level as in the past and, in general, should be considered as the time period before condition C/D is reached. If an element is in condition B a figure may be entered as a "Cost to Upgrade" and in this case this will be an estimate of the cost to return the element to condition B at the end of its current remaining life.

5.6 Condition appraisal exercises in the NHS have shown that it can be extremely useful to express the element's remaining life and the cost of upgrading data in the form of an annual replacement schedule/survey.

5.7 A detailed form will be needed to undertake the actual site survey — possibly with further element sub-divisions. However, provided it is possible to aggregate data into the 19 element categories, it will still be possible to make use of the WIMS property appraisal module. It is suggested that adequate space be provided for general comments about each element if a more detailed survey form is to be used.

6. *Fire Safety and Statutory Requirements*

6.1 To bring a building up to an acceptable level of safety can be costly and may be disruptive to the organisation. Nevertheless, a property assessment would be incomplete without any indication of safety levels, and cost involved in remedying deficiencies.

6.2 As with other appraisals two assessment levels are recommended. The first, broad brush level, will produce a District overview and the minimum information necessary as an input to the service/estate rationalisation process. The more detailed survey — which may involve other Statutory Authorities — will follow the outcome of the strategic planning. Appendix 1 should be used for the ranking.

6.3 For fire safety assessment a broad brush approach, which has already proved useful in practice, is to relate existing condition

to the following four classifications which have been agreed with the Home Office:

i a building which complies with all the statutory requirements and FIRECODE guidance (invariably a new property) is marked A;

ii existing buildings which comply with the FIRECODE guidance and statutory requirements are marked B;

iii a building which falls short of A or B should be marked C;

iv areas which are dangerously below either A or B standard should be marked D.

A supplemental assessment X may be added to C or D to indicate that, because of the nature of the building, improvements to structural fire precautions and means of escape are either impractical or too expensive to be tenable.

6.4 The law relating to the standards of health buildings and their operation is extensive and it is often difficult to identify what is relevant to specific situations. For this reason the Department has developed a comprehensive microfiche system which is updated quarterly and covers all the law and guidance affecting health buildings. This library should be considered as the basic source material for carrying out the assessments.

6.5 Health buildings as Crown property may be exempt from some statutory legislation. Recently this exemption was reduced and it is essential that the relevant Inspectorates are consulted. However, the Secretary of State does expect Health Authorities to comply with the various provisions. It is suggested that the relevant legislation should be used as a basis for assessing the property.

7. *Energy Performance*

7.1 Energy performance is an important factor in determining the overall efficiency of a property. The Department's energy code (ENCODE) provides guidance, as documents and computer software, on energy management, including survey and audit and energy efficiency techniques. It should be used in assessing the energy performance of all buildings. A very general overview of a District's estate can be gained from an analysis of the relevant Performance Indicator, ie energy usage per unit volume — GJ/100 cubic metres. Other commonly used second line indicators may also influence the assessment, the most useful being the Energy Cost Indicator — cost/GJ.

7.2 These calculations, together with the measurement upon which they are based, already exist throughout the NHS and are presently used for local estate management purposes and in the review process. It is therefore possible, without further surveys, to score each site and building block at a general level sufficient to provide an input into strategic planning. More detailed assessments into carefully targeted areas can be carried out at the second stage and as a follow-up to the strategic planning exercise.

7.3 The assessment used should be based on the energy used per unit volume (GJ/100 cubic metres). Within a District many factors can affect the values obtained and as such it will only give a broad brush indication of the performance for the District as a whole. The building type, its major specialisations, and the mix of accommodation, ie the proportion of 24 hour occupation with its continuous energy use to the intermittent energy use in '9 to 5' premises, can have a marked effect. This effect will be similar for Units and it is only in the consideration of sites and blocks that accurate comparisons can be valid. The climatic effect measured by 'Degree Day' temperature variations should be taken into account especially in the most important year on year comparisons. Having regard to these variable aspects it is for each District to establish their own targets which will be monitored in the annual Regional and District Reviews.

The ranking should take into account the above factors and should be based on the energy usage per unit volume:

GJ per 100 cubic metres

Condition A — 70–45

Condition B — 80–55

Condition C — 90–65

Condition D — 100–75

Note

The table shows a range of typical values which could reflect the difference between a teaching and a non-teaching district. It is expected that Health Authorities will adopt their own range of energy usage values appropriate to their local conditions.

The addition of X to score C and D should be made to indicate that the substantial improvement, sufficient to achieve a B score, to the building or engineering installation is either impossible or uneconomic to achieve.

7.4 The second appraisal stage is designed to target attention to those specific areas which are likely to produce greater refinements and more accurate costings. Because it is timed to follow on from

the rationalisation exercise, it will concentrate on those buildings which are guaranteed a useful future life in the Health Authority's strategy.

7.5 Further refinements of the assessments would adopt the following definitions:

Condition A —

A building which is constructed in accordance with the requirements of the Building Regulations 1985 and Approved Document L — Conservation of Fuel and Power, which contains practical guidance on ways of meeting the requirements of the Building Regulations.

Condition B —

A building which has undergone a co-ordinated conservation programme resulting in:

a. thermal insulation (including draught-proofing) to economic limits with effective modern controls for heating;

b. all services examined and changed, if necessary to maximise efficiency;

c. equipment regularly maintained and a record of reasonable energy management.

Condition C —

A building in which some energy measures may have been incorporated largely on an ad hoc basis. A low level of equipment maintenance and some energy management.

Condition D —

A building in which no energy conservation has been carried out. Energy management non-existent. A typical untreated EMS hut would usually fall into this category.

Figure 1

Procedure for NHS Property Appraisal

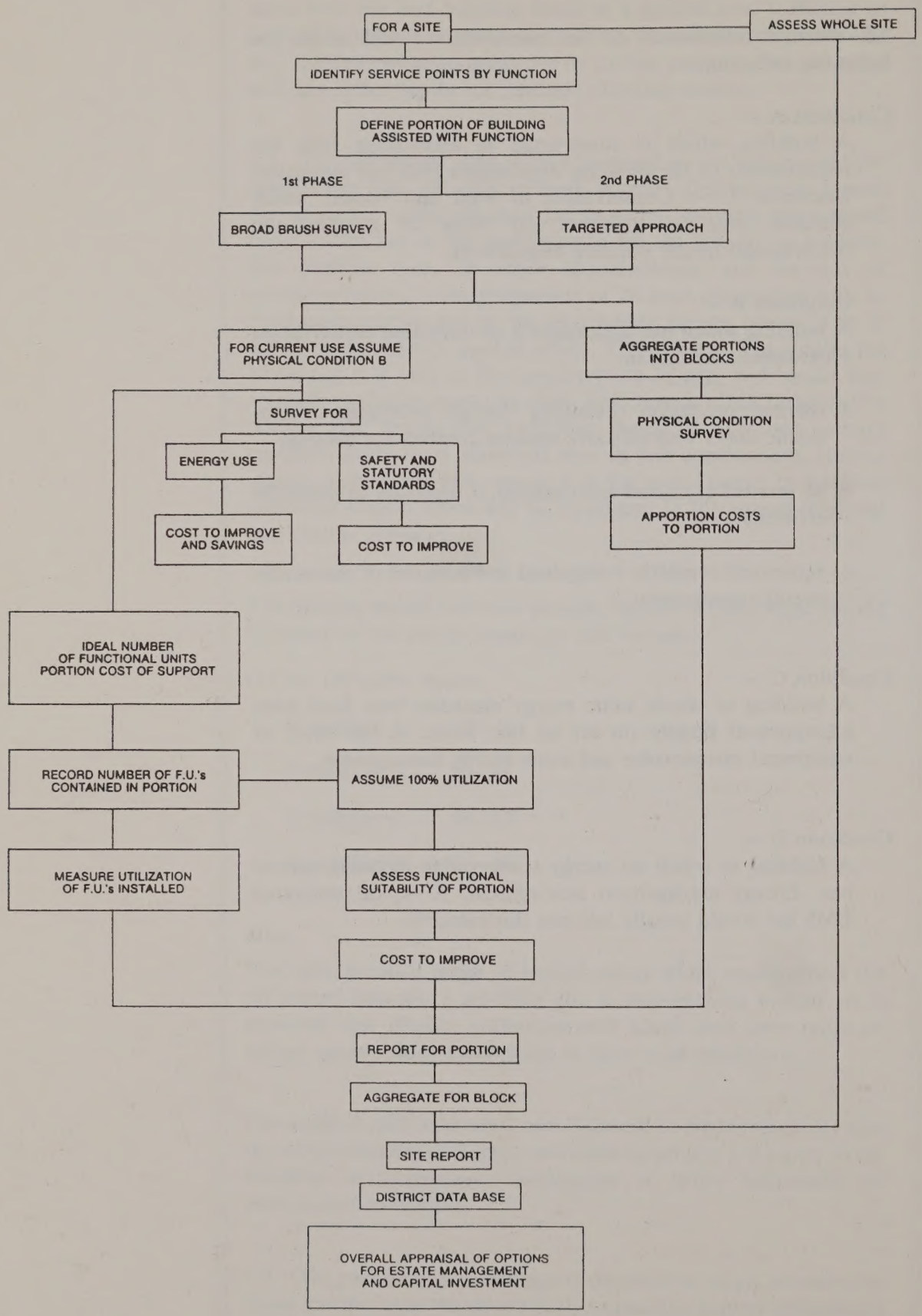

Figure 2

Minimum Data Set for Portion/Service Point

IDENTIFICATION .....

FUNCTION .....

Physical Condition
- Average Block Ranking
- Apportioned Cost to achieve B

Functional Suitability
- Space Relationships
- Facilities
- Environment
- Location in respect of Other Facilities
- Overall Ranking
- Cost to achieve B

Utilisation
- Overall utilisation of portion
- Utilisation of main areas
- Utilisation of support areas
- Functional Units available
- Maximum Functional Units space could accommodate
- Cost to raise overall utilisation to maximum Functional Units

Safety and Statutory Standards
- Fire
- Statutory Standards
- Overall Ranking
- Cost to achieve B

Energy
- Energy Performance
- Cost to achieve B
- Potential savings

Overall Portion Ranking

Total Cost to Condition B

Figure 3

Minimum Data Set for Block

IDENTIFICATION .....

MAIN CARE GROUP .....

Note: Some of the following assessments may not necessarily be applicable to a block (ie a building) unless it is a single-function block.

Physical Condition
- Ranking for the 19 elements
- Block Ranking
- Cost to achieve B

Utilisation
- Mean Block Utilisation
- Block Ranking

Functional Suitability
- Block Ranking
- Cost to achieve B

Safety and Statutory Standards
- Block Ranking
- Cost to achieve B

Energy
- Block Ranking
- Cost to achieve B
- Potential savings

Overall Block Ranking
Total Cost to B

Figure 4

Minimum Data Set for Site

IDENTIFICATION .....

MAIN CARE GROUP .....

Note: This data is for strategic planning purposes only.

Relationship
- To population served
- Convenience to staff
- Community Healthcare
- Availability of — Regional Specialities
  - Support Services

Site Layout
- Infrastructure
- Patient/Staff Access
- Car parking
- All functions on site
- Internal Communications
- Functional relationships

Utilisation
- Use of Land
- Overall ranking

Physical Condition
- Overall ranking
- Cost to achieve B

Safety and Statutory Standards
- Overall ranking
- Cost to achieve B

Energy
- Overall ranking
- Cost to achieve B

Figure 5

Property Overheads

Property overheads should be calculated in annual cost per sq metre, and include:

1. Maintenance to sustain an acceptable level
2. Heating
3. Lighting
4. Cleaning
5. Security
6. Ventilation
7. Notional Rent
8. Core Services
9. Contribution in lieu of rates

However, the above is not a definitive list. It is suggested that, for practical reasons, the calculation of property overheads may be better if based on financial accounts statements under the following expenditure headings:

— Engineering maintenance

— Energy and utility

— Building maintenance

— Grounds and gardens

— General estate expenses

— Domestic cleaning

— Security (say, 20% portering)

Amounts under the above headings should be aggregated and calculated in annual cost per sq metre.

Ranking Definitions

To ensure consistency a national scheme of marking should be adopted.

'A' Marking:
This indicates that the surveyed portion is either in full compliance with or exceeds the appropriate nationally published guidance and has a "full life" expectation. Some Authorities have prepared standards which are acceptable locally but fall short of the national guidance, in this case a 'B' marking would apply. No expenditure, except for routine maintenance, is required.

'B' Marking:
This means that the surveyed portion is reasonable and adequate even though it does not have a "full life" expectation or does not fully comply with the national guidance. A portion with this marking will, in most cases, be perfectly acceptable for the provision of healthcare. No capital expenditure would be required to improve the building. Repair and normal maintenance would be adequate to sustain the portion at 'B'.

'C' Marking:
A 'C' is assigned to a portion which is below the standard of 'B' and would require capital expenditure to upgrade the portion to 'B'. This expenditure would not exceed 50% of the replacement cost and would provide the portion with an expected remaining life comparable with that of a new provision.

'D' Marking:
A 'D' is assigned to a portion which is below the standard of 'C'. The capital expenditure required to achieve a 'B' would exceed 50% but be less than 100% of the replacement cost and would provide the portion with an expected remaining life comparable with that of a new provision.

'X' Marking:
This marking, appended to 'C' or 'D', indicates that attached to:

'C' the portion could not be upgraded so as to provide a remaining life comparable with a new provision.

'D' the capital expenditure required to raise the standard to 'B' exceeds the replacement cost or the portion could not be upgraded so as to provide a remaining life comparable with a new provision.

National Guidance

The national guidance referred to above will be the relevant publications in the series of Health Building Notes, Health Technical Memoranda, Health Equipment Notes and ADB Sheets.

Replacement Cost

The replacement cost should be based on the CAPRICODE cost allowances for the provision of the same number of functional units. An average allowance for on-costs or abnormals should be added and sums for equipment costs should be included.

Surveyed Portion

The survey portion will be a block or block portion.

Overall Ranking Procedure

Some Authorities in order to develop their strategies may wish to combine the scores from the five property appraisals into one overall ranking. This Appendix provides a suggested method for such a process.

The method is based on the "paired comparison" approach. This is where a team of decision makers consider the merits of any two items and compare the contribution each makes relatively to the overall objective. In parts A and B of this Appendix the objective is clearly specified. Any change in the objective will result in a different weighting for each survey.

Authorities may wish to vary the contribution of the individual surveys to the overall ranking while retaining the principle outlined here. Specific assistance can be obtained from the enquiry point given on the front cover.

Part A: One Score for the Five Surveys

The weightings for each survey come from a team who considered the question:

> How do the various factors determine the overall suitability of the estate to support healthcare?

For all surveys, except Space Utilisation, score:

A	as	5
B		4
C		3
D		2
CX		1
DX		0

For Space Utilisation, score:

Empty	as	0
Underused		2
Adequate		4
Overcrowded		3

Then multiply the five scores by the following weighting factors:

Functional Suitability	0.59
Physical Condition	0.24
Safety and Statutory Standards	0.10
Energy Usage	0.04
Space Utilisation	0.03

By summing the 5 weighted scores the overall ranking can be found from the table below:

Overall Score greater than	less than	Overall Rank
4.5		A
3.5	4.5	B
2.5	3.5	C
1.5	2.5	D
0.5	1.5	CX
	0.5	DX

For example, a ward might score

Survey	Result	Score	Weighting
Functional Suitability	C	3	$3 \times 0.59 = 1.77$
Physical Condition	A	5	$5 \times 0.24 = 1.20$
Safety and Statutory Standards	B	4	$4 \times 0.10 = 0.40$
Energy Usage	DX	0	$0 \times 0.04 = 0$
Space Utilisation	Underused	2	$2 \times 0.03 = 0.06$

Total = 3.43

Overall ranking C

If the objective was to minimise revenue expenditure, energy usage and space utilisation would be ranked considerably higher.

Part B: Nineteen Physical Elements

A similar process may be applied to the combination of the nineteen elements which comprise the physical condition survey. The objective which the team used in achieving the factors below was to determine the contribution of the individual elements to the overall physical condition.

Structure	0.23
External fabric	0.15
Roof	0.16
Internal fabric	0.03
Internal fixtures etc	0.03
External works	0.01
Electrical installation	0.05
Heating	0.04
Steam	0.04
Ventilation	0.03
Telecommunications	0.01
Alarms	0.02
Drainage	0.05
Piped medical gases	0.05
Water	0.05
Lifts	0.02
Boilers	0.02
Fixed plant	0.01
Fuel storage	0.01

Where a particular element is not applicable, eg no lifts in a single storey building, it should be scored as a 4 ie B in the overall ranking process.

Printed in the United Kingdom for Her Majesty's Stationery Office.
Dd.289159, 2/89, C35, 434/1, 5673, 33067.

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